American Gilsonite Company

P. O. BOX 28
BONANZA, UTAH 84008

Attn: Gordon, Page & Allen

September 29, 1981

Mr. Jackson W. Moffit, Area Mining Supervisor
United States Geological Survey, Conservation Division
2040 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104

RE: Lease U-0126940

Dear Mr. Moffit:

Enclosed please find six (6) copies of our proposed mining plan for the Bonanza Gilsonite vein on Federal Lease U-0126940. This plan has been completely updated and revised to address all of the requirements of Title 30 CFR, Part 231.10(c).

Due to the number of revisions made with regard to mine site locations and access road requirements, a surface survey with your agency, the Vernal BLM office, and the State Division of Natural Resources would be advisable.

Also, please note at the end of the report part of the plan that the gilsonite vein is not contained entirely within the legal boundary of this lease. I will need to be advised of how to proceed with incorporating the section of vein located in the SW¼ NW¼ Sec. 17 into the current lease or the proceedure for acquiring this section in addition to the existing lease. This situation should be addressed separately from the mining plan approval to prevent holding up development of the first four mines on this lease. Your help with regard to this matter is greatly appreciated.

I regret the long delay in preparing and submitting this plan, and hope that this draft is complete enough to be processed and approved.

Very truly yours,

Richard Carlbert

Encl.
6 copies Mine Plan (6 pgs)
6 copies Surface Map 1
6 copies Surface Map 2
6 copies Plan View 1
6 copies Plan View 2

AMERICAN GILSONITE COMPANY

PROPOSED MINING PLAN FOR THE BONANZA GILSONITE VEIN

FEDERAL LEASE U-0126940

GENERAL

Lease U-0126940 is located in the NE¼ and the N½, NW¼, Section 17, T9S, R24E, approximately three miles northwest of Bonanza, Utah.

Total relief of this lease is not over 250 feet, with the lowest portion (5140 feet above sea level) on the northeastern border, and the highest point (5323 feet above sea level) on the eastern border. Landforms within the lease area consist of a flat elevated terrace to the west which has been eroded to steep walled canyons grading into a gently sloping basin to the east. Drainage is toward the northeast into Coyote wash.

The plant life in the lease area consists of sparse amounts of sagebrush, saltbush, and greasewood. Rabbitgrass, prickly pear cactus, and several species of range grasses are minor components located within the boundaries of the lease.

Animal life in the lease area is relatively scarce due to a lack of perennial streams or springs. Those observed and noted include antelope, rabbit, coyote, hawks, owls, and mice. Various species of lizards also inhabit the terrain.

The lease is accessible by a road constructed for a previous drilling program which enters the lease near the vein on the eastern boundary and extends to almost the center of the lease. Access to the mine sites will be obtained by extending this road to the end of the lease roughly along the vein and constructing loop roads to easch site.

SURFACE FACILITIES

Surface preparation would begin by removing and stockpiling the layer of topsoil at each mine site. The locations for the various structures would be leveled, which might require some cut and fill type construction, and concrete piers cast where required. The remainder of the site would be graded so as to permit runoff water to enter the natural drainage system while avoiding the mine and facilities. While surface erosion is not expected to be a problem due to the low annual rainfall, all grades would be kept as low as possible.

At each mine site location on this lease, mine surface facilities would consist of a derrick having a 20 x 20 foot base and a height of 77 feet. A storage bin ranging from sixty to one hundred fifty tons capacity would be located to one side of the derrick. Located at least 100 feet from the shaft would be a hoist house having a 20 x 15 foot base, and a timberyard occupying

not over 2500 square feet. A compressor, usually housed in a small building or trailer would be located close to the hoist house. Conduit and piping would run along or under the ground between the hoist house, compressor, derrick, and airlift fans. The airlift fans would be located approximately fifty to one hundred feet from the shaft opposite the hoist house. Other surface features would include some type of latrine facility, and possibly a large water tank to be available for fire control at the mine site.

Electrical power to the mine sites will be provided by extending the existing line at the eastern border of the lease along the vein to the northwest. This line is typically spaced one hundred twenty five feet to one hundred fifty feet from the vein. Power rating of the line is 13,200 volts, 3 phase, and all powerlines would be constructed to be raptor safe as outlined in "Suggested Practices for Raptor Protection On Powerlines".

Primary access roads will be constructed in an acceptable manner with bar ditches on the sides and a slightly crowned surface. These roads, including drainage ditches would be thirty feet wide. Dip type crossings will be used at all washes and intermittent streams in order to assure that siltation and the accumulation of debris be avoided. Maximum grade on any road will not exceed eight percent.

It is anticipated that ground water will be encountered in the mining of this lease. This water will be pumped to the surface and discharged NPDES into natural drainages in accordance with EPA regulations. Ponding may be required prior to discharge. To help eliminate water from the mining areas, it may be necessary to drill boreholes to the bottom of the vein ahead of mining for the installation of pumps.

The Bonanza vein has been noted for containing methane gas. This fact may require the drilling of upreamed ventalation holes along the vein at locations other than the mine sites. These holes are typically twenty four inches in diameter.

Ore losses will be controlled through the use of bag house type dust collectors on the airlift systems. Ore is hauled from the mines in covered trucks and losses in loading will be minimized through the use of socks or loading chutes on the bins.

Federal mine safety regulations concerning the location of all structures, flammable materials, and vegetative growth surrounding or near each mine opening will be followed. Regulations relating to matches, smoking materials, or other ignition sources will also be strictly adhered to.

Hazards to public health and safety will be prevented by fencing off shaft areas and covering openings. A substantial surface pillar will be left above the active mining areas at all mines along this lease.

MINING METHODS

The gilsonite vein through the lease area strikes N67W with a dip of 2° south and ranges in width from eight inches at the surface to thirty six inches at a depth of 500 feet along the eastern border of the lease. Outcrops of the vein across the lease are minimal and widths of two to four inches are common where outcrops are found. A single diamond drill hole intercepted the

vein at a depth of 388 feet and coring indicated three feet of gilsonite at this horizon.

Mining will be performed utilizing a method of open stoping having timbered floors spaced at thirty foot intervals (top floor six feet below the surface or barrier pillar) in panels having the approximate dimension of 400 by 350 feet.

Spacing of the proposed mines has been planned to allow balanced mining as well as optimum mine site locations. The center to center distance of the proposed shafts are:

B-44 to B-46	790 feet
B-46 to B-48	805 feet
B-48 to B-50	830 feet
B-50 to B-52	820 feet
B-52 to B-54	830 feet
B-54 to B-56	830 feet

Mine shaft locations have been staked out along the vein on this lease.

Surface pillars are anticipated and will have a minimum thickness of 35 feet.

Equipment required in the mining operations consists of hand operated pneumatic rock picks used to break the gilsonite ore from the face. The ore is then gravity fed down to the bottom of the slope where it is fed into an airlift system to be transported pneumatically to the surface. Under some circumstances, a slusher is required to transport the broken ore to the shaft where it is hoisted to the surface in a skip.

Each mine will utilize a crew of 4 to 6 men, consisting of one or two miners, one or two chute pullers, a hoistman, and a timberman. Currently, only one shift per day is anticipated. Since mining will be done sequentially across the lease, no increase in manpower is anticipated. Mine life will range from five to seven years per mine under normal conditions.

MINING SEQUENCE

Mining will proceed at B-44 shortly after approval of this plan and proceed toward B-56. It is planned to have one mine in production while a second is in a stage of development. The availablity of equipment, sales of ore, and mining conditions encountered will generally determine the rate of mining.

From mining experience at our B-40 mine, the Bonanza vein narrows considerably at 850 feet. For this reason, all mine planning is referenced to a mining depth of 850 feet.

In setting up a mine to go on line, development usually requires a period of fourteen months. This is based on the time necessary to construct surface facilities, sink a shaft, and develop an escapeway.

To maintain compliance with the Federal mine safety laws, mining must be performed in such a manner as to allow two means of egress from each working area prior to the beginning of production. This requires that at least two mines in a series must remain operational at all times along the vein.

Thus, the initial stage of mining consists of development of a shaft and drifts to connect the new mine to an existing mine. Once connected, production from the new mine can begin. Some surface facilities must remain at any location designated as an escapeway until that location is no longer designated as such.

RECLAMATION

Upon entering each respective mine site, topsoil will be carefully stockpiled. At the end of each mine's life all surface facilities and scrap will be removed from the mine site. Disturbed areas will be recontoured to match the surrounding terrain and designed to control erosion during the regrowth period. The type or species of vegetation to be replanted will be determined in accordance with recommendations from the BLM in order to assure the best possible results.

Shafts and ventilation holes will be sealed with a reinforced concrete slab upon completion of mining. The top of the slab will be as level with the top of the natural ground as possible. Each slab will be a minimum of 12 inches thick.

ARCHEOLOGICAL

From the archeological survey performed on this lease in May of 1977, it was determined that development would pose little threat to archeological resources and thus would be considered to be negligible. Both vein and access roads have been investigated and cleared with the understanding that if antiquities are discovered in the course of development, the BLM Vernal District office and the USGS Salt Lake City office will be notified.

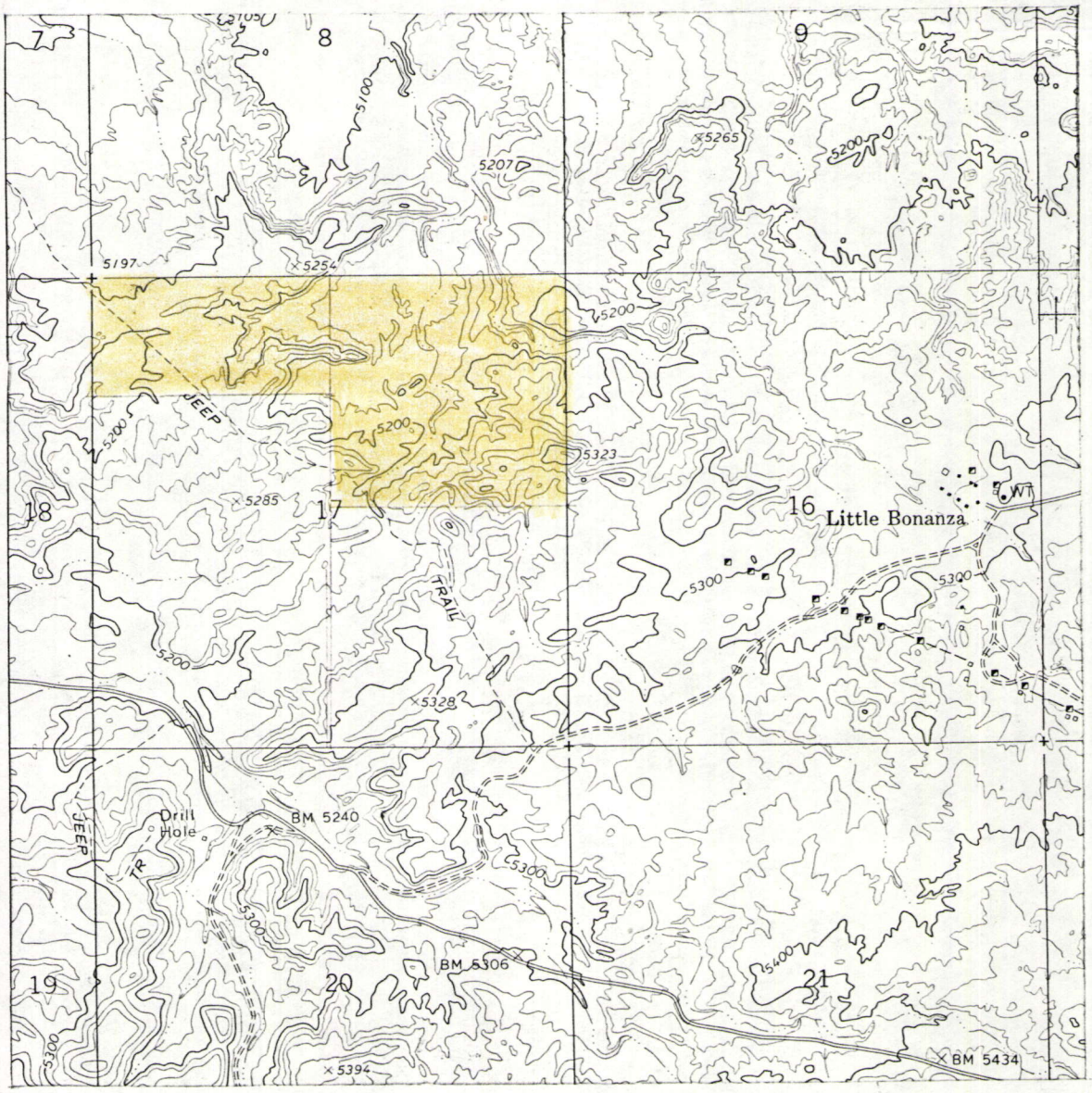
An additional archeological survey was performed prior to conducting the diamond drilling exploration program in late 1980.

EXPLORATION

Further diamond drilling type exploration and vertical drilling type exploration is anticipated to aid in the forcasting of ore demand and finacial considerations. As the need for this information is determined, permission to drill these holes will be requested through amendments to this plan.

LEASE BOUNDARY

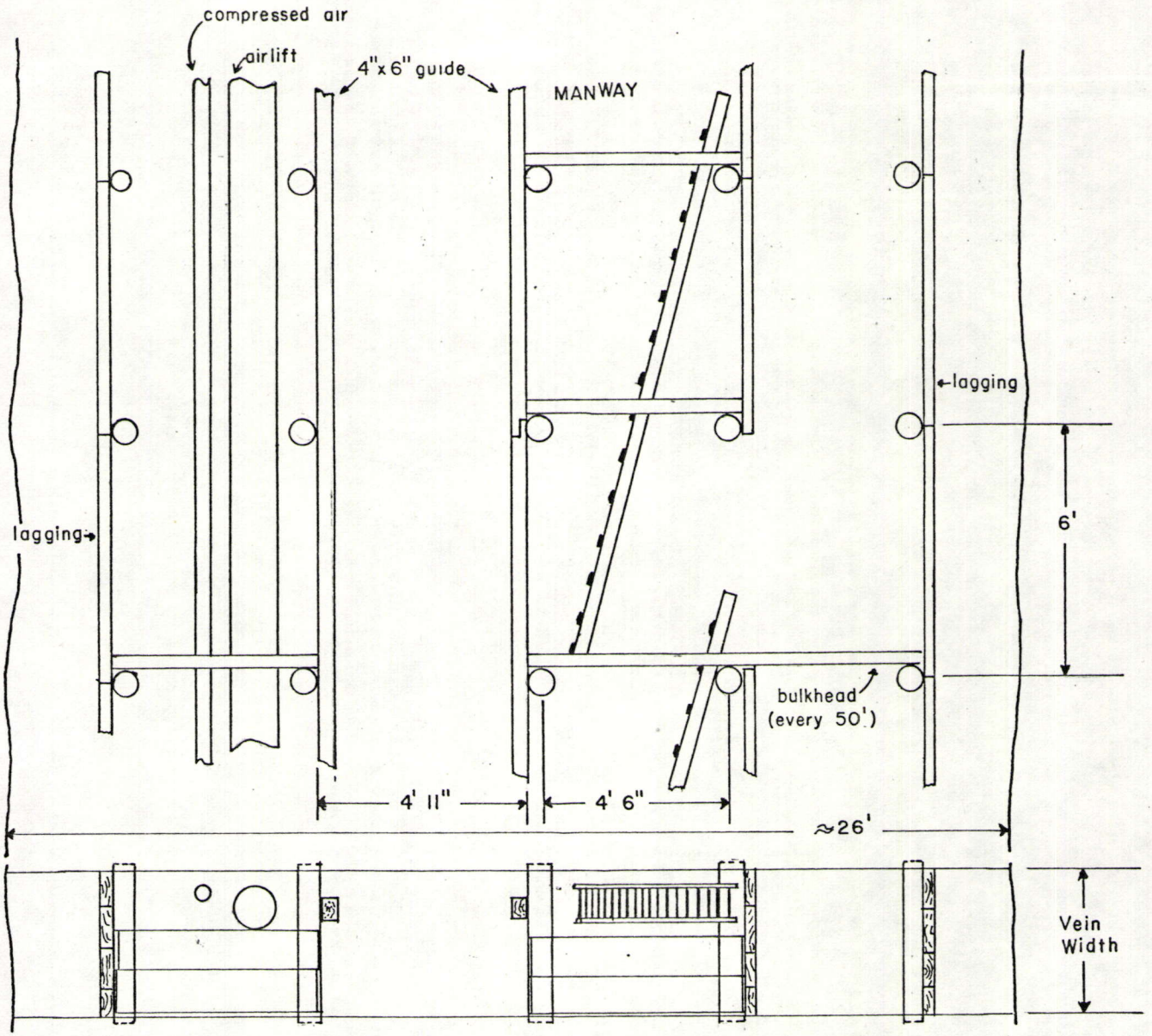
In a survey of the surface trace of the vein it has been determined that the vein leaves the lease and enters the SW¼, NW¼, Section 17, T9S, R24E. The spacing of the mines has anticipated future mining across this section. Information on how to proceed on aquiring rights to mine through this area will be necessary so applications can be made prior to mining the B-50 mine. As noted on the map, no surface disturbance of this area will occur if mined according to this plan.



MAP SHOWING LEASE LOCATION ON THE

USGS TOPOGRAPHIC SERIES, 7.5 MINUTE SERIES

BONANZA QUADRANGLE, UTAH - UINTAH CO.



SHAFT TIMBERING TECHNIQUE

FOUR COMPARTMENT SHAFT
FOR
NARROW VEINS

AMERICAN GILSONITE CO.
BONANZA, UTAH